

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/593,076	06/13/2000	Barry E. Willner	BOC9-1999-0075/1963-7376	7107

7590

06/19/2003

Joseph C Redmond Jr Esq
Morgan & Finnegan LLP
345 Park Avenue
New York, NY 10154-0053

EXAMINER

RODRIGUEZ, ARMANDO

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/593,076

Applicant(s)

WILLNER ET AL.

Examiner

Armando Rodriguez

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

The indicated allowability of claims 4,8-11,13,15-21 is withdrawn in view of the newly discovered reference(s) to Nagano, Iizuki and Strickland et al. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 does not define "an area on a patient", as such the use of "patient" encompasses a human being.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagano Toshiharu (JP 06-021893).

Figure (a) illustrates a beam transmission unit (1) having an RB1 beam for detecting obstacles, which may interrupt a main information transmission beam LB transmitted toward receiving unit (3). Upon interruption of RB1 by an obstacle the transmission of the main beam is stopped, as described in the abstract.

Figures 8(a) and 8(b) illustrates the transmission unit has having the RB1 encircled about the main beam LB, where the receiving unit has the same configuration for detecting an obstruction of the RB1 beam.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6,8-11,13-15,18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagano Toshiharu (JP 06-021893) in view of Strickland et al (Applied Optics, 1999) and Iizuki (JP 61-234636).

Regarding claims 4,6,8,9,10,11,13,15,18-20,

Figure 7(a) illustrates a beam transmission unit (1) having an RB1 beam for detecting obstacles, which may interrupt a main information transmission beam LB transmitted toward receiving unit (3). Upon interruption of RB1 by an obstacle the transmission of the main beam is stopped, as described in the abstract.

Figures 8(a) and 8(b) illustrates the transmission unit has having the RB1 encircled about the main beam LB, where the receiving unit has the same configuration for detecting an obstruction of the RB1 beam.

Figure 4 illustrates a lens system for coupling the RB1 beam to detectors (371) and the LB beam to detector (331).

Nagano does not disclose using segmented lenses.

Nagano discloses the claimed invention except for the segmented lenses. It would have been an obvious matter of design choice to use segmented lenses for coupling the RB1 beam and the LB beam to the detectors, since applicant has not disclosed that the segmented lenses solve any stated problem and it appears that the invention would perform equally well in the lenses suggested by Nagano.

Regarding claim 5,14

Nagano is silent as to detecting climatic conditions.

Strickland et al discloses experiments conducted to determine and detect bit error rate of a signal transmission beam caused by climatic conditions.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to apply the teachings of Strickland et al to the beam transmission system of Nagano to detect any attenuations of the beam caused by climatic conditions.

Regarding claims 7,16 and 17,

Nagano is silent as to a buffer circuit for an input signal prior to shutdown.

Iizuki discloses temporarily storing data in a memory device when communication is

Art Unit: 2828

incapable and transmitting the stored data by using the time of normal intermittent communication after restoration.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to apply the teachings of Iizuki of storing information when the transmission beam LB of Nagano when the beam is interrupted because it would restore the signal prior to the interruption.

Regarding claim 12,

Figure 7(a) illustrates a beam transmission unit (1) having an RB1 beam for detecting obstacles, which may interrupt a main information transmission beam LB transmitted toward receiving unit (3). Upon interruption of RB1 by an obstacle the transmission of the main beam is stopped, as described in the abstract.

Figures 8(a) and 8(b) illustrates the transmission unit has having the RB1 encircled about the main beam LB, where the receiving unit has the same configuration for detecting an obstruction of the RB1 beam.

Figure 4 illustrates a lens system for coupling the RB1 beam to detectors (371) and the LB beam to detector (331).

Nagano does not disclose using segmented lenses.

Nagano discloses the claimed invention except for the segmented lenses. It would have been an obvious matter of design choice to use segmented lenses for coupling the RB1 beam and the LB beam to the detectors, since applicant has not disclosed that the segmented lenses solve any stated problem and it appears that the invention would perform equally well in the lenses suggested by Nagano.

Art Unit: 2828

Nagano is silent as to a buffer circuit for an input signal prior to shutdown.

Iizuki discloses temporarily storing data in a memory device when communication is incapable and transmitting the stored data by using the time of normal intermittent communication after restoration.

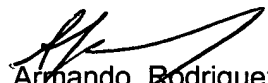
Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to apply the teachings of Iizuki of storing information when the transmission beam LB of Nagano when the beam is interrupted because it would restore the signal prior to the interruption.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Armando Rodriguez whose telephone number is (703) 308-6218. The examiner can normally be reached on 10-hour day / M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-4881.


Armando Rodriguez
Examiner
Art Unit 2828


Paul Ip
Supervisor
Art Unit 2828

AR/PI
June 16, 2003